

REMARKS

Claims 1 and 3-19 are presently pending. Support for amendment to Claims 1 and 18 is discussed below. Claim 2 is canceled without prejudice. No new matter has been added herewith. The following addresses the substance of the Office Action.

Anticipation/Obviousness

Darsillo et al. and Stoye et al.

Claims 1-8 and 14-19 were rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Darsillo et al. (U.S. Application Publication No. 2002/0004131) as evidenced by Stoye et al. (Paints, Coatings and Solvents, Second, Completely Revised Edition). The Examiner stated that the specifications and values regarding the coating disclosed in Darsillo et al. overlap with the ranges of the present application. However, the focus of Darsillo et al. is very different from the present application and the coatings of Darsillo et al. can not be obtained using the specified values according to the present claims.

Darsillo et al. relates to glossy coatings with very specific properties, i.e., glossy coatings which are nonbrittle and crack-resistant, have an excellent rate of liquid absorption, a relatively high liquid absorption capacity, and excellent adhesiveness. The coatings can be on a wide range of substrates, such as a wide variety of different polymer substrates and cellulose (see paragraph [0028]). It is clear that the preferred focus of Darsillo et al. is on nonporous polymers. More specifically, Darsillo et al. is directed towards a recording medium with improved non-brittle properties, crack resistance, rub resistance, e.g., see paragraph [0092], and strongly adhesive coating to substrate (e.g., pick-resistance during a printing process). This is achieved, first and foremost, by having 2 pigment groups that form a very dense packaging structure in the presence of relatively high amounts of binder (see paragraph [0061]). In addition, paragraph [0062] discloses that the glossy coating exhibits a high degree of adhesiveness (increased crack resistance and increased pick resistance), both between the particles themselves and between the particles and the substrate. Together with the fact that these pigments are nano-sized and a high surface area is desirable (see paragraph [0045]), the person of ordinary skill in the art would readily understand that the amount of binder must be significantly large.

In contrast, the amount of binder used in the presently claimed paper and process is significantly less than that disclosed by Darsillo et al. (i.e., a ratio of binder : pigment of not more than 2:100 parts by wt) because it does not or can not function as an adhesive between different particles as in Darsillo et al. Rather, the binder used in the presently claimed paper functions as a general viscosity regulator.

Moreover, as indicated above, the coatings of Darsillo et al. are different in that they are designed to provide a solid, crack-resistant coating with excellent adhesiveness, relatively high liquid absorption capacity to preferably a (nonporous) polymer film (and possibly paper) to obtain the above-mentioned properties. This not only requires a large amount of binders, but also requires a large coat weight, which is also evidenced by the Examples, which show that the coatings have a coat weight of about 15 g/m². Clearly, it was not the intention of Darsillo et al. to obtain thin coatings having low weights.

In contrast, the present application addresses the specific problem of providing coatings for natural, uncoated paper with rough surface structures having peaks and valleys. The Applicant was able to solve this problem and provide a uniform coating. Most importantly, they were able to provide very thin and fine coatings based on the discovery that only the fibers localized at the surface of the paper substrate need to be enclosed to obtain a coated natural paper with attractive printability, e.g., low mottling.

To further distinguish over the cited references, the Applicant has amended Claims 1 and 18 to recite “wherein the preparation has a coat weight of from 0.5 to 7 g/m² (absolutely dry) per side.” The thin and fine coating results in a paper that has desirable haptic properties, wherein the paper has an appearance and feel similar to natural paper. Support for the amendment regarding the coat weight range can be found in paragraph [0018] of the English translation of the specification as filed.

As indicated above, Darsillo et al. do not contemplate such low coat weights. This is demonstrated on the one hand by the Examples, wherein Darsillo et al. used a dry coating of 15 g/m², but also by the desired properties to be achieved by Darsillo et al. For example, Darsillo et al. states that a glossy coating with ‘relatively large liquid absorption capacity’ is provided (see paragraph [0019]). It is clear that significant coating amounts of coating are necessary to attain such a property, especially in the case of a non porous polymer film as a substrate.

The Applicant also notes that the Examples disclosed by Darsillo et al. best reflect the different characteristics and application of the coatings by Darsillo et al., which are used in ink-jet printing for example, as indicated in the text in paragraphs [0080] and [0092]). Referring to Tables 1 and 2 of Darsillo et al., the prepared coatings in the examples have a very low “Solids Content” (i.e., only 20 or 25%), whereas offset coatings on commercial large scale paper machines require at least 60-70%. In addition, the examples have an unacceptably low coating viscosity. For example, at 20% solids, the apparent viscosity at low shear is reported in Table 1 to be < 50 centipoise Brookfield viscosity. In contrast, normal offset coatings on regular paper machines require at least 1000-2000 centipoise.

In view of the amendments to the claims and the preceding remarks, the claims are neither anticipated by Darsillo et al. nor obvious over Darsillo et al. as evidenced by Stoye et al.. Nothing in the teachings of Darsillo et al. or Stoye et al. would have led the skilled artisan to develop the presently claimed paper and related processes, wherein the preparation applied to at least one side of a paper substrate is applied with a very thin and fine coating that has a very low coat weight of from 0.5 to 7 g/m², which results in a paper that has desirable haptic properties, wherein the paper has an appearance and feel similar to natural paper. Accordingly, the Applicant respectfully requests that the rejection be withdrawn.

Darsillo et al. in view of Moreland and Stoye

Claims 9-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Darsillo et al. (*supra*) in view of Moreland (U.S. Patent No. 5,977,018) and as evidenced by Stoye et al. (*supra*). The Examiner noted that the art of Darsillo et al., Moreland and the presently claimed invention is analogous, as pertaining to papers used for printing. The Applicant respectfully disagrees and asserts that a skilled person would never have turned to Moreland when dealing with the problem underlying the presently claimed invention for the following reasons.

Moreland relates to very specific printing systems with security measures for print media that can not be modified, either chemically or mechanically, without detection. Print media specifically mentioned here are issued money orders, checks, transaction receipts and legal documents. In order to come to such secured print media both the recording medium (e.g., paper substrate) and the ink must both be equipped with a relevant reactive component (e.g., a

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hardener) of a well-know (two-component) epoxy resin system, in order to form a thermoset polymer (when printing the print medium) that irreversibly fuses the ink (in)to the paper. Such an application is completely remote from any regular offset printing process and a skilled person would never look for solutions in Moreland and would not have applied the conditions, such as the epoxy resin system, to a paper substrate according the presently claimed invention.

Moreover, in view of the amendment to Claim 1 and the remarks above in connection with the rejections over Darsillo et al. and Stoye et al., Moreland fails to fill the gap between the presently claimed paper and related processes and the teachings of Darsillo et al. and Stoye et al. Accordingly, Claims 9-13 are not *prima facie* obvious and the Applicant respectfully requests that the rejection be withdrawn.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

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Co-Pending Applications of Assignee

Applicant wishes to draw the Examiner's attention to the following co-pending applications of the present application's assignee.

Docket No.	Serial No.	Title	Filed
FLGDK26.003APC	11/994497	CAST COATING DEVICE	30-May-2008
FLGDK26.004APC	12/297201	METHOD FOR APPLYING INTERFERENCE PIGMENTS TO A SUBSTRATE	01-Jun-2009
FLGDK26.005APC	12/302266	COATED PAPERS HAVING IMPROVED LABELLING PROPERTIES	29-May-2009
FLGDK26.006APC	12/438343	CAST-COATING-LIKE INKJET PRINTING MATERIAL	12-Oct-2009
FLGDK26.007AUS	12/868569	RECORDING MATERIAL FOR LASER MARKING	25-Aug-2010

CONCLUSION

In view of Applicants' amendments to the Claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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By: /Raymond D. Smith/

Raymond D. Smith
Registration No. 55,634
Agent of Record
Customer No. 20995
(949) 760-0404